

ABSTRACT OF THE DISCLOSURE

TORQUE SENSING APPARATUS AND METHOD

5 A torque sensor comprising a shaft of magnetostrictive material; a pair of magnets
having oppositely sensed poles positioned circumferentially around the shaft so as to
induce a localized magnetic field in the shaft between the poles. A torque applied to
the shaft is sensed by a flux detector positioned circumferentially between the magnet
poles so as to detect a component of the localized magnetic field which escapes from
the shaft as a result of the torque. With this design, there is no need to permanently
10 magnetize the shaft or a collar attached to the shaft, as in the prior art. The prior art
manufacturing step of permanently magnetizing the collar or its shaft is also thus
eliminated, greatly simplifying the manufacturing.